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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/595,459

01/26/2007

Clement Hiel

CTCPCT002-US

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74119

7590

04/07/2008

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EXAMINER

GRAY, JILL M

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

04/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/595,459	Applicant(s) HIEL ET AL.	
	Examiner Jill Gray	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 16-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/19/2007</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Buning et al., 4,195,141 and 4,247,436 (Buning).

Buning discloses composite rod comprised of a matrix material that further comprises at least one resin, at least one hardener and one or more accelerators and a plurality of longitudinally extending fibers of one fiber type embedded in the matrix, wherein the fiber/resin matrix is cured to form the composite rod. See both documents in their entirety, in particular note the Examples.

Accordingly, the disclosure of Buning anticipates the invention as claimed in present claim 16.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Buning et al., 4,195,141 and 4,247,436 (Buning), as applied above to claim 16.

Buning is as applied above but does not specify the particular type of glass fibers. In this regard, it is the examiner's position that the disclosure of Buning of glass fibers would have rendered obvious a fiber type of the instant claimed modulus of elasticity as set forth in present claim 23. Moreover, the requirement for S-glass fibers is no more than a preferential selection of one glass reinforcement fiber from among many being selected for its' art recognized purposed. Hence, this requirement is not

construed to be a matter of invention in the absence of factual evidence to the contrary. Applicants are invited to provide such evidence.

Therefore, the teachings of Buning would have rendered obvious the invention as claimed in present claims 23-24.

7. Claims 16, 23-24 and 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson 4,515,435 in view of Buning et al., 4,247,436 and 4,195,141 (Buning), as applied above to claim 16.

Anderson discloses a composite core comprising a matrix resin and a plurality of longitudinally extending fibers of one type embedded therein to form a fiber/resin matrix, per claim 16. The fibers can be glass fibers and the resin is epoxy. In addition, Anderson discloses that a coating can surround the core and a layer of conductors surrounding the core. See entire document and in particular, abstract, column 3, lines 163-43, column 5, lines 24-45, column 8, lines 26-35, and Figures 1 and 2. Anderson is silent as to the specific epoxy composition.

Buning is as set forth above and teaches composite rod comprised of a matrix material that further comprises at least one resin, at least one hardener and one or more accelerators and a plurality of longitudinally extending glass fibers of one fiber type embedded in the matrix, wherein the fiber/resin matrix is cured to form the composite rod.

Though Anderson is silent as to the curing agents for his epoxy, it is well known in the art to include one or more hardener and accelerators in an epoxy to facilitate curing of said resin. This would have been an obvious expedient to one of ordinary skill

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in the art. Moreover, the teachings of Buning would have provided direction to the skilled artisan to modify the teachings of Anderson by including a hardener and accelerator in his epoxy resin to facilitate curing.

Regarding claims 23-24, Anderson does not specify the particular type of glass fibers. In this regard, it is the examiner's position that the disclosure of Anderson of glass fibers would have rendered obvious a fiber type of the instant claimed modulus of elasticity as set forth in present claim 23. Moreover, the requirement for S-glass fibers is no more than a preferential selection of one glass reinforcement fiber from among many being selected for its' art recognized purposed. Hence, this requirement is not construed to be a matter of invention in the absence of factual evidence to the contrary. Applicants are invited to provide such evidence.

Therefore, the combined teachings of Anderson and Buning would have rendered obvious the invention as claimed in present claims 16, 23-24 and 26-28.

8. Claims 16-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quigley 5,540,870 in view of Buning et al., 4,247,436 and 4,195,141 (Buning), as applied above to claim 16.

Quigley teaches a structural member of fiber reinforced composite material comprising a rod formed with an outer sheath of fiber reinforced material and an inner core material of fiber reinforced material. The fibers can be carbon or glass, and each layer can be formed from an epoxy resin, per claims 16-19, 22 and 25. See entire document and abstract. Quigley does not specifically teach that the first layer is made from carbon fibers surrounded by glass fibers or adjusting the carbon/glass ratio to

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change the mechanical properties. Nonetheless, Quigley teaches that the fiber materials that are employed in his invention include glass fibers and carbon fibers. See column 1, lines 45-49. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form a fiber reinforced composite material using carbon fiber surrounded by glass fibers and to adjust and modify the carbon/glass ratio during routine experimentation, commensurate with the desired properties of the end product, such as enhanced tensile strength and flexibility. Quigley is silent as to the specific epoxy components.

Buning is as set forth above and teaches composite rod comprised of a matrix material that further comprises at least one resin, at least one hardener and one or more accelerators and a plurality of longitudinally extending glass fibers of one fiber type embedded in the matrix, wherein the fiber/resin matrix is cured to form the composite rod.

Though Quigley is silent as to the curing agents for his epoxy, it is well known in the art to include one or more hardener and accelerators in an epoxy to facilitate curing of said resin. This would have been an obvious expedient to one of ordinary skill in the art. Moreover, the teachings of Buning would have provided direction to the skilled artisan to modify the teachings of Quigley by including a hardener and accelerator in his epoxy resin to facilitate curing.

Regarding claims 23-24, Quigley does not specify the particular type of glass fibers. In this regard, it is the examiner's position that the disclosure of Quigley of glass fibers would have rendered obvious a fiber type of the instant claimed modulus of

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elasticity as set forth in present claim 23. Moreover, the requirement for S-glass fibers is no more than a preferential selection of one glass reinforcement fiber from among many being selected for its' art recognized purposed. Hence, this requirement is not construed to be a matter of invention in the absence of factual evidence to the contrary. Applicants are invited to provide such evidence.

Therefore, the combined teachings of Quigley and Buning would have rendered obvious the invention as claimed in present claims 16-26.

No claims are allowed.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jill Gray whose telephone number is 571-272-1524.

The examiner can normally be reached on M-Th and alternate Fridays 8:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton I. Cano can be reached on 571-272-1398. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jill Gray
Primary Examiner
Art Unit 1794

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Primary Examiner, Art Unit 1794